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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/493,692	01/28/2000	Bahram Javidi	98-2091	2545

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EXAMINER
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LAVARIAS, ARNEL C

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 06/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/493,692

Applicant(s)

JAVIDI, BAHRAM

Examiner

Arnel C. Lavarias

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2001 and 14 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 22-83 is/are pending in the application.
- 4a) Of the above claim(s) 34-83 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election of Group I, Species 1, Claims 29-33, with Claims 22-28 being generic to Species 1 and 2 of Group I, in Paper No. 12, dated 4/14/03, is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 34-83 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions and species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 12, dated 4/14/03.

### *Drawings*

3. The corrected or substitute drawings were received on 1/16/01 in Paper No. 6. These drawings are not acceptable, as set forth below.
4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:  
  
Figure 1A- Reference numerals 102a, 104, 202, 204, 302, 304, 310, 314, 316, 600, 508, 510, 512  
  
Figure 12A- Reference numerals 602, 604, 606, 608, 610, 600  
  
Figure 12B- Reference numerals 606, 702, 704, 706, 700  
  
Figure 13- Reference numerals 822, 824, 838, 826, 832, 844, 828, 836, 834, 848.

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A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

Figure 13- Reference numeral 800.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "600" has been used to designate both ID card and optical encryption system. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "700" has been used to designate both optical system/processor and optical decryption system. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

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8. The disclosure is objected to because of the following informalities:

Page 7, line 9- 'products' should read 'produces'

Page 14, line 12- insert 'by' after 'decrypted'

Page 18, line 1- 'ration' should read 'ratio'

Page 18, line 12- 'Figure 3' should read 'Figures 3A-D'

Page 21, line 2- 'Figure 8' should read 'Figures 8A-D'

Page 21, line 3- insert 'is' after 'noise'

Page 22, line 9- 'forth' should read 'both'

Page 24, line 20- insert 'and' after '14'.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claim 29 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 29, lines 6 and 8 recite that the system for verifying the authenticity of an object include a random code disposed within the path of the first signal and a filter disposed within the path of the first signal. It is unclear whether the Applicant intends these two limitations to be one and the same, since the specification of the disclosure (See Page 15, lines 12-15) discloses that the filter disposed within the path of the first signal

includes/displays the Fourier transform of the random code. The Examiner notes that since this filter is placed at the Fourier plane of the Fourier transform lens, the Fourier transform of the random code, and not the random code itself, is disposed within the path of the first signal (i.e. by displaying the Fourier transform of the random code on a SLM filter).

***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 22-33, as best understood, are rejected under 35 U.S.C. 102(a) as being anticipated by Javidi/Ahouzi (B. Javidi, E. Ahouzi, “Optical security system with Fourier plane encoding”, Appl. Opt., vol. 37, no. 26, Sept. 10, 1998, pp. 6247-6255.).

Javidi/Ahouzi discloses a system for verifying the authenticity of an object (See entire document, and in particular Figure 1) comprising an optical coherent laser signal source; a first optical subsystem receiving a first signal from the signal source and providing as output therefrom a first output signal; a second optical subsystem receiving a second signal from the signal source and providing as output therefrom a second output signal; and a third optical subsystem receiving the first and second output signals for comparing the first output with the second output signal. The first optical subsystem comprises a first beam expander; a first collimating lens; a primary image disposed within the path of

the first signal; a filter, which includes the Fourier transform of a random code, disposed within the path of the first signal; a first transforming lens disposed within the path of the first signal; and an imaging subsystem for imaging a first reference image comprising the combination of the primary image and the random code. The second subsystem comprises a second beam expander; a second collimating lens; a beam splitter; and a second transforming lens. The third optical subsystem comprises a beam combiner; a CCD detector; and a signal comparator that includes a nonlinear transfer function generator, a transforming system, and an analyzing system.

13. Claims 22-28, 31-33, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Javidi/Horner (B. Javidi, J. L. Horner, "Optical pattern recognition for validation and security verification", Opt, Engineering, vol. 33, no. 6, June 1994, pp. 1752-1756).

Javidi/Horner discloses a system for verifying the authenticity of an object (See entire document, and in particular Figures 2a and 2b) comprising an optical coherent laser signal source (See 'Laser Diode' in Figure 2b); a first optical subsystem receiving a first signal from the signal source and providing as output therefrom a first output signal (See first lens after 'Laser Diode' and 'An image bonded with the phase mask:  $g(x,y)e^{jM(x,y)}$ ', in Figure 2b); a second optical subsystem receiving a second signal from the signal source and providing as output therefrom a second output signal (See first lens after 'Laser Diode' and 'Reference phase mask:  $e^{jM(x,y)}$ ', in Figure 2b); and a third optical subsystem receiving the first and second output signals for comparing the first output with the second output signal (See second lens, CCD, nonlinear transfer function

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generator, inverse Fourier transformer, verification in Figure 2b). The third optical subsystem comprises a beam combiner (See second lens in Figure 2b); a CCD detector (See 'CCD' in Figure 2b); and a signal comparator that includes a nonlinear transfer function generator (See nonlinear transfer function generator connected directly to 'CD' in Figure 2b), a transforming system (See IFFT connected to nonlinear transfer function generator in Figure 2b), and an analyzing system (See 'Verification' in Figure 2b).

14. Claims 22-30, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Javidi/Tang (U.S. Patent No. 5367579).

Javidi/Tang discloses a system for verifying the authenticity of an object (See entire document, and in particular Figure 1) comprising an optical coherent laser signal source (See 9 in Figure 1); a first optical subsystem receiving a first signal from the signal source and providing as output therefrom a first output signal (See 11, 12, 13, SLM1, SLM3, FTL1 in Figure 1); a second optical subsystem receiving a second signal from the signal source and providing as output therefrom a second output signal (See 17, 19, 20, 21, 23, 25, FLT2, 15 in Figure 1); and a third optical subsystem receiving the first and second output signals for comparing the first output with the second output signal (See 35, 27, 29 in Figure 1). The first optical subsystem comprises a first beam expander (See 11, 12 in Figure 1); a first collimating lens (See 13 in Figure 1); a primary image disposed within the path of the first signal (See 5 in Figure 1); a filter, which includes the Fourier transform of a random code, disposed within the path of the first signal (See SLM3 and 7 in Figure 1); a first transforming lens disposed within the path of the first signal (See FTL1 in Figure 1); and an imaging subsystem for imaging a first reference



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image comprising the combination of the primary image and the random code (See LCLV 15 in Figure 1). The second subsystem comprises a second beam expander (See 19, 20 in Figure 1); a second collimating lens (See 21 in Figure 1); a beam splitter (See 23 in Figure 1) for receiving the collimated second signal and a reference signal from the second reference image (which is displayed on LCLV 15 in Figure 1); and a second transforming lens (See FTL2 in Figure 1).

### *Conclusion*

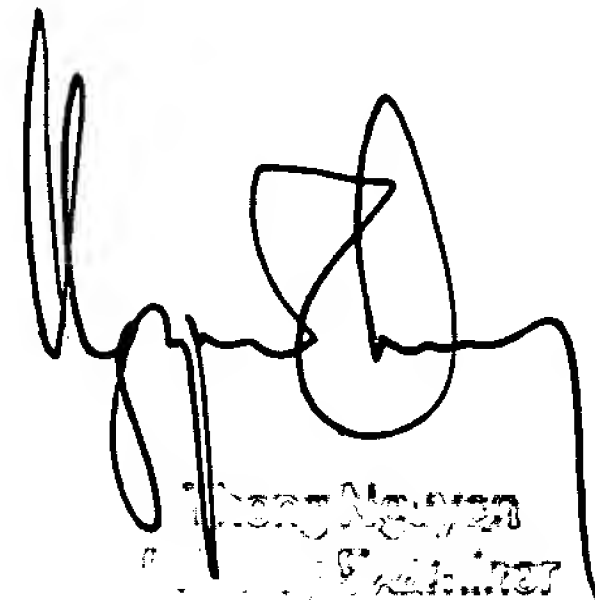
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 703-305-4007. The examiner can normally be reached on M-F 8:30 AM - 5 PM EST.

The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.



Arnel C. Lavarias  
June 9, 2003



Arnel C. Lavarias  
Examiner